

# Penn State hosts full house

BY SHEILA MILLER

UNIVERSITY PARK — Pa dairy and livestock producers packed the auditorium of the J Orvis Keller Building on the Penn State campus Monday for the 1981 Dairy and Livestock Day.

Welcomed by College of Agriculture Dean J. M. Beattie, the producers began a full day of management and marketing seminars.

Kicking off the session was Robert H. Rumler, executive chairman of the Holstein Association of America, headquartered in Brattleboro, Vermont.

Rumler advised the producers to use caution in their operations, but added young farmers should not be overly concerned about the economic future of entering the animal industry.

"The livestock industry has always offered a great degree of stability," he stated, but warned producers to be careful about over-extending their capital investments. "Each producer must work toward developing an operation with the highest efficiency possible with the least financial investment."

Concerning the recent doom and gloom forecasts for the agricultural future, Rumler commented these types of headlines serve no good purpose.

"I feel there is reason for optimism," he said, "The American public has been well fed at low cost over the years."

Rumler added financial institutions' hesitant attitudes toward investing in the agricultural industry are a reflection of areas where banks have over-extended credit lines to farmers. These revenue sources, he said, are responsible, especially in the dairy industry, for contributing to surplus milk production.

"The financial community has encouraged more dairy operations to start up, adding more cows and milk to the market. Financial institutions have to be responsible in directing their clients into profitable enterprises. This over-extension of credit has led to increased interest and debt," he reflected.

Commenting on the future of

foreign exports of breeding stock, Rumler called on his experiences in the Holstein Association and said the U.S. has the highest level and largest genetic pool for Holstein cattle than any other place in the world. He added as long as the U.S. maintains a level of superiority in the genetic base of cattle, there will continue to be a demand for breeding stock in foreign markets.

He noted, however, the market level for the live animals has been somewhat depressed during the last few years. He cited reasons for this market trend which included the fact the domestic market was quite good, the rise in transportation costs, the conservative work economy, and import regulations which tended to be overly restrictive.

Rumler spoke about the current popularity of embryo transferring and noted "ET is moving out of the novelty stage and is rapidly seeking its place as a genetic tool in all breeds of cattle."

The Holstein executive closed by expressing his concern with recent "food fadism".

"The American public hears propaganda ranging from don't eat meat and eggs to don't drink whole milk. The animal industries, however, are producing the greatest percentage of nutrients for the human diet."

"People now-a-days hear anti-propaganda which lists almost everything as being carcinogenic. These consumer groups will cry wolf once too often."

"What the public needs to practice is common sense eating habits — don't over eat and eat well-balanced meals."

Robert O. Martin, director of Farm Systems Research and Development at Agway's Syracuse, N.Y. office spoke to the producers on energy.

"There is no energy shortage," he said, "but we're facing an energy crisis brought on ourselves by our thirst for a standard of living created by cheap fuel."

He cited energy sources "all around us" such as water, coal, uranium, wind, wood, methane, solar, and gasohol, as potential energy sources.

Martin discussed research and development done by Agway in the

handling of manure and in construction of energy-efficient homes and buildings.

Professor of Dairy Science Larry D. Muller spoke to dairy producers on the "hottest topic in the dairy industry" — feeding buffers to dairy cows.

"There are many questions on feeding buffers we don't have answered," he stated, "Buffers have been handled with a shotgun approach on the farm — give them a shot and see what happens."

Muller cited the various buffers available, which include sodium bicarbonate, magnesium oxide and magnesium carbonate, bentonite, cement dust, and calcium carbonate and calcium oxide. These buffers, he said, work either in the rumen or small intestine, affecting fermentation and fluid turnover to correct acidosis.

What brings on the acid condition in the digestive tract? According to Muller there are several things.

— increased use of concentrates in feeding rations,

— high moisture grains which add to the acid load;

— increased amounts of ensiled forages in operations striving for increased labor efficiency through mechanical labor;

— reduced particle size of feed; — acid water; and — early lactation ration adaptation.

All of these items listed result in less chewing, less salivation, and less rumination, he pointed out, resulting in decreased natural buffers.

Muller showed on a graph how asetic acid in the rumen decreases in higher grain rations. Propionic acid, in turn increases, and results in a lower milk test. This can occur when the ration consists of 60 percent ensiled forage and 40 percent grain, he noted.

When the rumen pH drops to 6.2 or lower, Muller stressed there can be problems. A natural drop in pH occurs four hours after feeding, he said. With buffers added to the ration, this drop in pH is reduced.

Signs that a cow might be suffering from acidosis include going off feed, less cud chewing, loose stools, reduced fecal pH, undigested grain in feces; and reduced milk fat.

Muller emphasized a cow's milk test will not be brought back to normal with the addition of buffers to the ration, but it will be improved. Palatability problems related to buffers in the ration will lower the dry matter intake and will result in lower milk production.

The dairy scientist noted there is a major problem in prepartum rations for dry cows and the rapid change over to a high grain diet after calving. This problem, which can aggravate acidosis, is not as much a problem in stanchion operations where cows are fed on an individual basis as in operations using group feeding.

The benefits of feeding buffers, he concluded, will be higher milk test, greater feed intake, and better starch utilization which may trigger more milk production.

## Research compares Suffolk, Finnsheep productivity

UNIVERSITY PARK — Is it possible to get too much of a good thing? According to T.S. Katsigianis, assistant professor of animal science at the University of Kentucky, the answer is "yes".

Katsigianis spoke to sheep producers during the 1981 Dairy and Livestock Day held at Penn State on Monday. He discussed current research which compared Suffolk and Finnsheep-cross ewes in lamb and wool production.

The study looked at Suffolk, which produce the epitome of growth and carcass conformation in lambs, said the researcher, and Finnsheep which demonstrate early sexual development and prolificacy.

A major factor in the study involved artificial rearing of lambs. According to Katsigianis, ewes were allowed to raise only two lambs, with any extra lambs being taken from the ewe within 24 hours

of birth.

"The longer a lamb nurses its natural mother, the more it will resist the artificial system," he explained.

In the artificial rearing, the lambs were fed a commercial lamb milk replacer with 30 percent fat. They were fed from a multiple-nipple nursing bucket, with two lambs per nipple. Cold milk was available to the lambs at all times, with tepid milk only given the first few days. The lambs were then weaned at 30 days and put on feed. This 30 day weaning was due to the expense of the milk replacer, Katsigianis said.

The study revealed both breeds had 90-100 percent fertility rates with both producing lambs as yearlings. However, the number of lambs varied, with Finnsheep-cross ewes producing two lambs as yearlings and Suffolks only producing singles. This prolificacy

difference carried through in the second and third lambing season with Finns having three or more lambs and Suffolks having two lambs.

Despite the fact the Suffolks had fewer lambs, the total weights of the lambs were comparable, noted the researcher. The single Suffolk cross lamb weighed 12.6 pounds, while the two Finnsheep-cross lambs totaled 12.6 pounds. The larger Suffolk-cross lambs required lambing assistance for the yearling ewes, Katsigianis said.

In wool production, the Suffolk-crosses sheared slightly heavier fleeces, however there was no difference in quality, the researcher noted.

The study revealed Suffolk-cross ewes produced lambs that had a slight edge on the Finnsheep-cross weaned on the ewe, but the Finns,

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